Modular Universal Oscillographs

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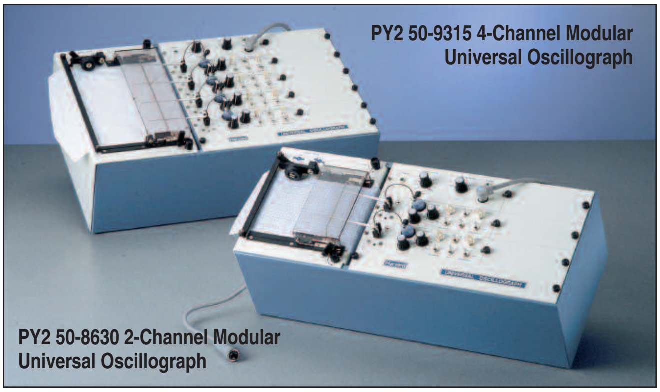
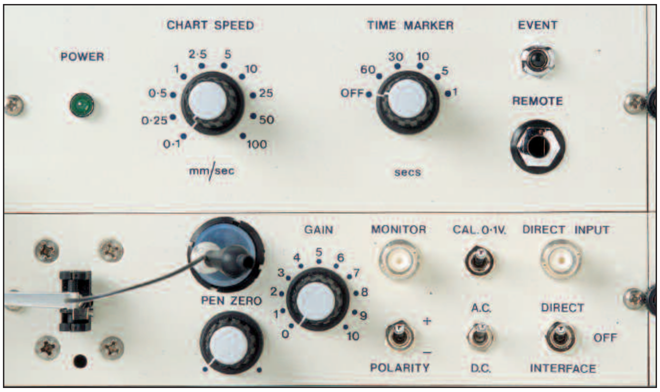


PY2 50-9315 4-Channel Modular Universal Oscillograph

PY2 50-8630 2-Channel Modular Universal Oscillograph



- Curvilinear or rectilinear recording
- Available in two sizes:
  - 2 channels for one or two writing channels
  - 4 channels for one, two, three or four writing channels
- For use with Harvard Apparatus Amplifier Interfaces, see pages I58 to I60, which plug in directly to the oscillograph
- Accept inputs from freestanding amplifiers or transducers via BNC connector (For Harvard Apparatus Research Blood Pressure Transducer, see Cardiovascular Section, for Isotonic and Isometric Transducers
- Output via BNC connectors for use with data acquisition systems while simultaneously recording
- Modular, compact systems
- Ten chart speeds from a fast 100 mm/sec to a slow 0.1 mm/sec (100, 50, 25, 10, 5, 2.5, 1, 0.5, 0.25 and 0.1 mm/sec)
- Built-in event channel
- ‘Monitor’ socket on pen amplifier for amplified signal output to PY2 50-8895 Cardiotach Interface, see page I59, FM tape recorder, A/D converter, etc.
- Pen amplifiers and pens with disposable ink cartridges in 4 colors: black, blue, red and green
- Built-in, crystal-controlled, adjustable time channel of 1, 5, 10, 30 and 60/min
- Removable panels for interface units and meters
- Pen lifter bar
- Plastic pen guard

These oscillographs are designed around a pen amplifier module which contains the circuits to power the pen and operate the various amplifier interface modules on the following pages. The oscillographs are supplied with 2 or 4 factory-installed pen amplifier modules with either curvilinear or rectilinear writing.

Each pen amplifier has an input toggle switch which is used to select ‘Direct’, ‘Interface’ or ‘Off’.

When on ‘Direct’, the input is taken from the ‘Direct Input’ BNC socket which connects to self-powered transducers such as the Harvard Apparatus Research Grade Blood Pressure Transducer, see Cardiovascular Section and the Harvard Apparatus Research Grade Isometric Transducers, see page I8, or Freestanding Amplifiers, pages I65 to I67.

When on ‘Interface’, the pen amplifier input is from the plug-in Amplifier Interface, see following pages, located next to the pen amplifier.

‘Off’ is selected when the amplifier is not in use.

To use the amplifier, the input is selected and a selector switch is set to either AC or DC depending on the type of signal to be recorded. With the switch in the ‘Off’ position, the pen is then set by turning the ‘Pen Zero’ knob either to the center of the chart (for ECG measurements) or to the bottom of its swing (for isotonic, isometric and blood pressure measurements). ‘Direct’ or ‘Interface’ is next selected and the Gain is increased until the pen starts moving. If necessary, the pen position can be further adjusted using the DC level control on the Interface Adapter.A calibration switch provides a 0.1 volt signal. Each pen amplifier has a ‘Monitor’ (analog) output BNC socket.

An ‘Event’ button supplied with the Oscillograph is useful for noting the occurrence of drug additions, etc. When the ‘Event’ button is momentarily pressed and then released, a ‘tick’ is marked on the chart paper. When the ‘Event’ button is pressed for a longer period, the output signal is held constant at either the high or low side of its range.

These oscillographs are for use with Harvard Apparatus’ amplifier interfaces for processing signals from transducers, electrodes, sensors, thermistors, etc. Each Interface is tailored to convert its unique input into a voltage suitable for the pen amplifier of the Modular Universal Oscillograph. These interface modules are easily inserted, removed or exchanged.

These modular oscillographs are supplied complete with dust cover, one black ink cartridge per channel, one roll of paper, remote event push-button and operating instructions.